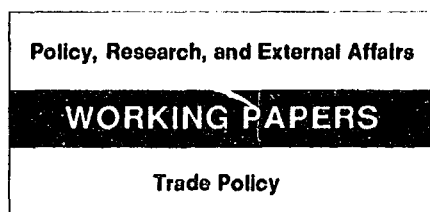


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Antidumping Enforcement in the European Community

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Antidumping measures affecting developing countries are concentrated in industries with shifting comparative advantage—in sectors with strong, politically influential interest groups. So in following an export-oriented trade strategy, developing countries should probably concentrate on sectors that have weak political influence in developed countries.

This paper — a product of the Trade Policy Division, Country Economics Department — is part of a larger effort in PRE to understand the economics of the emergence of “fairness” as a standard for regulating international trade, its implications for the continued openness of the international trading system, and its continued function as an important vehicle for development. Copies are available free from the World Bank, 1818 H Street NW, Washington, DC 20433. Please contact Nellie Artis, room N10-013, extension 37947 (27 pages, with tables).

In the European Community (EC), as in the United States, “injury” is what antidumping is all about. Antidumping laws are a flexible tool for preventing imports from displacing domestic production in politically influential industries.

The vehicle for achieving that goal in the EC, however, is not protectionist rules, as in the United States, but protectionist discretion.

The empirical results of Eymann’s and Schuknecht’s study have implications for EC trade policy after 1992. If protectionist interests demand compensation for the abolition of national protectionist barriers after 1992, EC antidumping measures offer them considerable scope for achieving their goals since measures are largely determined by political discretion. Antidumping measures could therefore become a pinnacle of “Fortress Europe.”

The results also suggest certain strategic considerations for the trade policy of developing countries. Eymann and Schuknecht argue that antidumping measures affecting developing countries are concentrated in industries with shifting comparative advantage, such as steel products, basic chemicals, and synthetic fibers. (Among the newly industrialized countries, high-tech firms are a frequent target of dumping investigations.) And such protection is more likely in sectors with strong, politically influential interest groups.

If that is indeed the case, it is not sufficient that developing countries simply follow an export-oriented trade strategy. They also need to concentrate on sectors that have weak political influence in developed countries.

The PRE Working Paper Series disseminates the findings of work under way in the Bank’s Policy, Research, and External Affairs Complex. An objective of the series is to get these findings out quickly, even if presentations are less than fully polished. The findings, interpretations, and conclusions in these papers do not necessarily represent official Bank policy.

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Antidumping Enforcement in the European Community

Angelika Eymann and Ludger Schuknecht

Antidumping laws are the primary instrument of protectionism in the European Community (EC).¹ During the 1980s, the EC ruled on some 903 dumping claims.² The average ad valorem equivalent of antidumping measures between 1980 and 1985 was 23 percent, with peaks as high as 50 percent or more; the average tariff on manufactured goods was 7 percent (Messerlin 1989). Imports of products subject to antidumping investigations have fallen on average to half their initial level within five years of initiation of an investigation (Messerlin 1989).

This chapter demonstrates the prominence of antidumping laws as an instrument of trade policy in the EC. It looks at how that instrument is applied by examining the incidence of antidumping measures by sector and country and the administrative procedures followed in antidumping cases. Based on these findings and on an empirical analysis of the determinants of antidumping decisions, it argues that implementation of antidumping laws is governed more by administrative and political discretion than by technical determinations. The "fairness" or "unfairness" of foreign trade practices is part of the rhetoric of EC trade policy, but preventing "injury" to politically influential domestic producers is what motivates the application of antidumping measures.

The EC's antidumping regulations are not based on any economic notion of dumping but on the GATT Antidumping Code. The specifications of the GATT code are relatively broad. They define "dumping" as sales below the "full" unit cost of production plus a "reasonable" profit margin. The notions of "full" and "reasonable" are not well specified, leaving considerable scope for discretionary interpretations of whether dumping has occurred in a particular instance. Thus the institutional structures governing the determination of dumping within a nation's trade laws are of prime importance.

The GATT code allows countries to operate within the specifications in two different ways. The United States has taken one path, the EC another, but

both paths ultimately lead to an outcome that equates injury with unfairness and fairness with import restrictions. The United States has added precise specifications to the GATT generalities, leaving little discretion to the agencies that evaluate dumping petitions (Finger, Hall, and Nelson 1982). The U.S. Congress, however, has designed the rules in a protectionist manner to cover all instances of injury. The EC has taken the alternative approach of translating the GATT code into general operational language, without adding extensive detail. The administering agency, the EC Commission, is entrusted with interpreting that language to preserve an undefined sense of fairness. Political influence is secured through the administrators' accountability to the EC Council and to the member governments. In other words, both the United States and the EC use antidumping measures to prevent "injury" from imports to domestic producers: the United States formulates protectionist rules while the EC applies protectionist discretion.

Who are the targets of EC antidumping measures?

Incidence by country groups

Antidumping is the EC's frontline defense against imports, but not all countries have been equally deterred by antidumping measures. Japan, Eastern European countries,³ and a few developing countries including China, Korea, Mexico, Taiwan, Turkey, and Yugoslavia have been the object of a disproportionate share of such measures.

Forty-nine countries were involved in the 903 dumping investigations conducted during 1980-90 (table 13.1). Almost half of these cases (445) involved industrial countries, particularly the United States and Japan, which accounted for two-thirds of the 445 cases. The remaining cases were divided almost equally between Eastern European countries (220) and developing countries (238). Of the cases against developing countries, 30 percent involved the newly industrialized countries of Asia (71 cases, or 8 percent of total cases), mostly Taiwan and South Korea.

A dumping investigation has three possible outcomes: rejection of the claim, the levying of an antidumping duty, or negotiation of a voluntary price increase (price undertakings) with the parties accused of dumping. Of the two restrictive outcomes -- duties and price undertakings -- price undertakings are the more favorable to the accused party since they allow the foreign exporter to collect the protectionist rents -- the price increase. About one-quarter of the 903 cases were rejected, 35 percent resulted in imposition of an antidumping duty, and 40 percent were resolved through price undertakings.

As a group, industrial countries' share of affirmative and negative decisions was close to the average for the 903 cases (table 13.2). Eastern European countries had a larger than average share of cases resolved through price undertakings (56 percent), a more favorable outcome than antidumping duties. Developing countries had a higher than average share of cases in which antidumping duties were levied (43 percent) but also a slightly higher than average share of rejected claims (27 percent; 30 percent for the newly industrialized countries). These figures can be interpreted to suggest that imports from larger countries -- industrial countries and Eastern European countries -- cause more injury and therefore that cases against them resulted in a larger share of affirmative decisions. The results also suggest that developing countries have less leverage for negotiating profitable price increases than do larger countries.

Another way to assess the relative impact of antidumping measures is to compare a country's or group's share of antidumping cases with its share of merchandise imports by the EC (table 13.3).⁴ While 49 percent of cases have been initiated against industrial countries, they account for 60 percent of EC imports. The ratio of antidumping cases to import share varies widely for individual countries, however. Australia and Switzerland each accounted for only 0.1 percent of antidumping cases while their imports constituted 1 percent and 6 percent, respectively, of total imports. By contrast, Japan, which accounted for 7 percent of EC imports, was the object of 19 percent of the antidumping cases.

As a group, the Eastern European bloc was the most adversely affected by antidumping measures relative to import share. That group accounted for 10 percent of EC imports but 24 percent of its antidumping cases. Of individual countries, Romania, Czechoslovakia, and East Germany had the highest share of antidumping cases relative to import share; Czechoslovakia and East Germany also had high percentages of cases with restrictive outcomes.

Developing countries fared relatively well as a group: 27 percent of antidumping cases compared to 30 percent of imports. Some individual countries, however, were subject to a disproportionate share of antidumping measures. China, Mexico, Turkey, Yugoslavia, and, among the newly industrialized countries, Korea and Taiwan accounted for 70 percent of the antidumping measures directed against developing countries but for only 20 percent of that group's share of EC imports.

Incidence by sector

The incidence of antidumping cases by industrial sector presents a distinct pattern of sectoral concentration (table 13.4). Almost 60 percent of the cases against industrial countries involved chemical products, machinery, and office and computing equipment.

Cases against developing countries (except the newly industrialized countries) are concentrated in sectors often considered to have shifting comparative advantage: 57 percent of the cases involved steel products, basic chemicals, and synthetic fibers. Antidumping measures against steel imports protect the EC steel cartel, while measures against synthetic fiber imports complement the protection against textile and clothing imports negotiated in the Multifiber Arrangement. This pattern suggests that EC protectionism through antidumping measures is preventing developing countries from profiting from their comparative advantage.

Among the newly industrialized countries, high-tech firms are a frequent target of dumping investigations. More than one-third of the cases involved

consumer electronics products, a sector with shifting comparative advantage and sophisticated technology requirements.

The sectoral pattern of antidumping measures suggests that such measures are being applied to prevent any loss of domestic production to emerging stronger competitors among both developed and developing countries.

Antidumping procedures in the United States and the European Community

The suggestion of a politically motivated pattern of protection that emerges from the analysis of the sectoral and country incidence of antidumping measures is reinforced by an examination of the way in which antidumping decisions are reached in the EC. A comparison of EC procedures with those in the United States is informative. The contrasts between the two systems throw into strong relief the one important characteristic they share: both achieve protectionist ends, despite their very different means.

The United States

In the United States, national rules specify the GATT code in a way that leaves only limited scope for bureaucratic discretion and political intervention into any one case.⁵ Protectionist interests are accommodated by the protectionist nature of the rules (Finger and Murray 1990).

U.S. trade laws cover four distinct phases in the antidumping process: application, investigation, decision, and appeal. Applications that fulfill certain requirements with respect to form and content automatically lead to investigations. The procedural rules governing the time frame and rights of parties involved in an investigation are clearly defined. The conditions specified for the imposition of preliminary duties, enforcement, and prevention of circumvention are unambiguous. U.S. administrators have little discretion in dumping cases: their determination in any case must conform with detailed legislation and extensive administrative regulations (table 13.5).

For antidumping measures to be applied, both dumping and injury have to be proven during an investigation. The two are investigated separately, dumping by the International Trade Administration and injury by the International Trade Commission. The rules governing the determination of dumping are relatively stringent. Dumping exists when the "normal value" of a product is higher than its export price; "normal value" is defined as the price of the product in the exporter's home market, the price in a third market, or full production costs plus a profit margin.⁶ The difference between normal value and export price -- the dumping margin -- determines the size of the antidumping duty or negotiated price increase. The criteria for a finding of injury are less detailed and involve such issues as market share and capacity utilization.

If both dumping and injury are found, an antidumping duty equal to the dumping margin must be imposed. The accused exporter can, however, avoid the duty by agreeing to raise the price by the amount of the dumping margin. Frequently, the parties negotiate voluntary export restraints as an alternative to price undertakings.

Two other factors further decrease bureaucratic discretion and increase the likelihood that investigations will be conducted impartially. First, the protective order system allows the parties involved to inspect each other's files, thereby preventing collusion between administrators and either of the parties. Exporters accused of dumping can review the material on which the injury claim is based.⁷ Second, the Court of International Trade can remand a case to the administering agency if the court finds that the agency decided the case "arbitrarily, capriciously, or in abuse of its discretion."

The scope for political intervention into an individual investigation is also small. Neither Congress nor the president can intervene directly in an investigation. Over the long term, however, political influence can be exerted on the process through executive nominations for the head of the International Trade Administration and members of the International Trade Commission and through legislative changes in the antidumping law.

The European Community

The EC antidumping process differs significantly from that of the United States. EC regulations translate the GATT Code into operational language but they do not add specificity beyond the code. In deciding a case, the administering agency, the European Commission, interprets the regulations as it deems relevant to the case. Accountability to the member governments through the Council (the forum of member governments that operates as the EC legislature) ensures that political interests will be taken into account in the application of administrative discretion.⁸ (The high degree of administrative discretion in the EC system compared to the U.S. system is illustrated in table 13.5.)

The EC process has five phases: application, preselection, investigation, decision, and appeal. Applications by interested groups are forwarded to the Commission, which, in the preselection process, has the discretion to reject an application or initiate an investigation. The Commission first determines which applications fulfill the formal criteria and then consults the Council's advisory committee about which of these applications should lead to an investigation.⁹

The investigation is conducted by the Commission. Procedural rules allow some discretion with respect to time frame, imposition of temporary duties, and prevention of circumvention. The rights of the parties involved are well defined. The rules for the determination of dumping are similar in concept but not in detail to those of the United States. Formal criteria for evaluating injury were added to the law only in 1984. They include such factors as changes in market share, capacity utilization, employment, and profits. These criteria give the Commission significant discretion in the determination of injury.

Two important factors that reduce administrative discretion during an investigation under the U.S. system are absent from the EC system. The investigation is less transparent and verifiable than in the United States,

because of the lack of a protective order system giving all parties to the dispute the right to view the others' files. Also, the EC system provides only limited scope for judicial appeal. The European Court of Justice cannot remand a case to the Commission on the basis of an abuse of bureaucratic discretion.

After a finding of dumping and injury, the Commission should also consider issues of broader public interest -- whether users and consumers of the product under investigation would be harmed by antidumping measures -- before making a final decision. The Commission is not, however, bound by any specific rules in its evaluation of such issues. In none of the 903 cases considered during the 1980s did the Commission rule against the imposition of antidumping measures on the basis of injury to users and consumers.

The Commission has considerable discretion in deciding how and by how much the price of the affected product is to be increased -- whether by price undertaking or antidumping duty. Duties and undertakings can be set at any value up to that of the established dumping margin; they need not equal the full dumping margin.

Accountability is imposed through direct political scrutiny. Politicians can interfere through the Council at the two decisive stages of an antidumping procedure. They can block or promote the initiation of an investigation in the preselection phase and they can pressure the Commission to apply its discretionary powers in the investigation in accord with political objectives. The Council can reject the Commission's findings with a qualified majority vote (fifty-four of seventy-six votes).

The Council also exerts political influence over the antidumping process in two other, less direct ways. It nominates the heads of the Commission, determines their salaries, controls their reappointments, and influences their future careers in national politics. And it can request changes in the regulations implementing the GATT code. An example is the introduction in 1984 of formal rules for determining injury. This legislative means of bringing antidumping decisions in line with political interests is far less developed than in the United States, however.

Thus the administrative framework of the EC antidumping process indicates that protection is its goal and suggests that the key to achieving that goal is administrative and political discretion rather than protectionist rules, as in the U.S. system. In the following section, we present the results of an empirical analysis of the determinants of antidumping decisions to test that hypothesis.

An empirical investigation of the EC antidumping process

Finger, Hall, and Nelson (1982), in an empirical investigation of antidumping cases in the United States, concluded that the decision to accept or reject a claim is based on the technical application of antidumping rules. We conducted an analogous test to determine whether political discretion or the application of technical/economic criteria better explains that same choice for EC antidumping cases. From our analysis of EC administrative procedures and the sectoral and country incidence of antidumping cases, we hypothesized that political factors determine the choice between acceptance and rejection of a claim. Although, as is explained later, there are some rules (details, specifications) that also influence decisions, considerable latitude remains with administrators to follow unstated objectives and unstated criteria. We find that domestic producers have a better chance of obtaining relief from import competition through antidumping measures the stronger their case for demonstrating "injury" and the more politicians depend on their support.

The absence of clearly specified rules governing other aspects of the antidumping process as well as the decision to accept or reject a claim suggests that, almost by definition, political factors determine how antidumping measures will be applied. The Commission has discretion to choose not only whether to accept or reject a claim, but also whether to select an application in the preselection stage, to levy duties or negotiate price undertakings, and to impose duties or undertakings that are lower than the

dumping margin. A thorough investigation into the motives underlying these choices is, however, impeded by a lack of published information.¹⁰

Econometric modeling

For our analysis of the factors underlying the EC's decisions to accept or reject a claim, we examined EC antidumping reports for information on the specific details of each investigation.¹¹ We also gathered information on domestic and foreign producers. After selecting our explanatory variables, we investigated the direction of their impact on the choice to accept or reject a claim using maximum likelihood estimation of a binary logit model.¹² The sign of the estimated coefficient for each variable reflects the direction of this impact on the probability that a claim will be accepted; a positive sign indicates that acceptance becomes more probable as the size of that variable (such as industry size) increases.

One-tailed t-tests were used to check whether the null hypothesis -- that impact is in the opposite direction -- can be rejected at the usual levels of significance (5 percent and 1 percent). Additionally, a goodness of fit-index reflects the explanatory quality of the estimated model specification.¹³

Description of explanatory variables

Explanatory variables were selected to reflect both political and technical/economic influences, as predetermined by our hypotheses. The political variables represent both national and EC pressures and international pressures; the technical variables reflect the two criteria that are supposed to govern in the antidumping process: injury and dumping. (The data appendix table provides details on data sources and variable types for each of the independent variables.)

Variables measuring political influences. At the international level, we expect that a convincing threat of foreign retaliation will reduce the likelihood of an affirmative decision. Therefore, countries that absorb a

large share of EC exports are expected to be confronted with fewer trade barriers. The respective variable contains the EC export value for each country¹⁴; its coefficient is expected to have a negative sign. Relative international lobbying power is reflected in three dummy variables for newly industrialized countries, developing countries, and Eastern European countries. The newly industrialized countries and developing countries are expected to have little political influence because of their predominantly decentralized industry structure.¹⁵ The coefficients for these dummy variables are expected to be positive. Eastern European countries, with their centralized trading systems, are expected to be politically influential, so the coefficients for their dummy variables are expected to be negative.

The impact of various EC-based interest groups is reflected by the set of *domestic political variables*. Value added and number of employees per sector are used as indicators of lobbying power.¹⁶ Industrial sectors with high employment and high value added are expected to be particularly effective lobbyists for affirmative and highly protectionist decisions (see Finger, Hall, and Nelson 1982). Positive signs of the coefficients can be expected.

Two variables reflect the degree of organization and unanimity among petitioners for an antidumping measure. Associations are the officially recognized and inclusively organized representatives of EC industries; they also have the necessary experience and contacts to affect EC policy. We expect decisions to be more protectionist when an application has been forwarded by an association; the coefficient for this dummy variable is expected to be positive. When individual EC firms in the petitioning industry explicitly refuse to cooperate or object to an application, a considerable weakening of the petitioners' case can be expected. When the antidumping report indicates resistance from an EC competitor, the respective dummy variable takes a value of zero; its coefficient is expected to be positive.

EC antidumping reports also contain various industrial policy arguments, such as the need to avoid "dependence on foreigners" or the "social or political importance" of the petitioning industry. The corresponding variable

indicates direct or indirect intervention by an EC government into the process. A positive impact on the probability of an affirmative decision is expected when a government intervenes.

Finally, a dummy variable is included to clarify the effects of the institutional change initiated by the EC Council in the last quarter of 1984, establishing formal rules for injury determination. We expect that the implementation of these rules has resulted in a tightening up of the procedure since 1984 and so in an increase in the number of rejections relative to acceptances for the years 1985-90. The variable takes the value of one for the period 80-84; its coefficient is expected to have a positive sign.

Variables measuring technical influence. The degree to which technical factors are applied in the *determination of dumping* is examined using the two variables selected for this purpose by Finger, Hall, and Nelson (1982) in their U.S. study. They argue that high average wages in a sector indicate high human-capital intensity and can serve as a proxy for domestic cost advantage. The protectionist bias in the EC decisionmaking mechanism increases the probability of affirmative findings in cases of cost disadvantage, especially when the Commission uses production costs to determine normal value. The expected sign of the coefficient for this variable is negative.

Product differentiation within a single antidumping application is approximated by the number of NIMEXE positions (statistical data categories) per case. Finger, Hall, and Nelson suggest that the coefficient of the variable should be negative since the pricing concept for dumping is relatively precise and can be more readily applied to a closely defined product than to an aggregate of products.

For *injury determination*, the influence of technical and economic criteria is reflected by variables for industry layoffs, changes in market share (for EC and foreign firms), and decreased profits. These factors are cited in the list of administrative criteria to be applied by the EC Commission. As already mentioned, the vague formulation of the rules allows

for considerable discretion, so injury may be interpreted in ways that stray from the original intention behind the new rules.

We include a dummy variable with a value of one when the antidumping reports indicate layoffs by petitioners and predict a positive sign for the coefficient. The coefficient of the variable for changes in the exporter's market share is expected to be positive because increases in foreign market shares should lead to more affirmative decisions. Increases in the market share of EC producers should affect decisions adversely; the coefficient is expected to be negative. Decreases in profits are represented by a dummy variable with a value of one; the expected sign of the coefficient is positive.

Results

The results of the estimation indicate the strong influence of several injury proxies and political influence variables on the decision to accept or reject a claim (table 13.6). One clear message is that injury counts. The injury proxies -- layoffs, decreased profits, and loss of EC market share by EC producers -- prove to be the relevant technical variables that contribute to a positive decision in an antidumping case. The better a domestic producer is capable of demonstrating injury, the better the chances for winning relief from import competition.

The political influence of domestic industries, unified in their request for antidumping measures, also affects the chances of an affirmative outcome. Large industry size and active government support -- indicators of the political importance of the EC producers -- improve the chances of winning a case. The results show that the explanatory value of the model specification that combines both political and technical criteria is highest (estimation 6.3 in table 13.6).

International political resistance and the technical criteria for determining dumping seem to play a negligible or ambiguous role. Despite the importance of industry associations in EC lobbying, the coefficient of that

variable was not significant. We suspect a biased picture for cases initiated by associations because they may be able to push very weak cases through the preselection stage.

The fact that foreign market penetration does not affect antidumping decisions as expected is noteworthy. This result suggests that EC producers are more concerned with changes in their own market share than with relative changes among foreigners' shares. Or it may be that firms (or countries) that can effectively penetrate the EC market and increase their market share rapidly are also more effective in political counterlobbying.

Another interesting result concerns the change in rules governing injury determination. The estimation shows that the Commission granted less relief after implementation of the formal rules. In other words, the new rules are less protectionist than the unwritten interpretation of injury that was applied before. This contrasts with experience in the United States, where changes in the rules have made them increasingly protectionist and facilitated affirmative determinations (see chapter 14 and Finger and Murray 1990).

Conclusion

In the European Community, as in the United States, "injury" is what antidumping is all about. Antidumping laws are a flexible tool for preventing imports from displacing domestic production in politically influential industries. The vehicle for achieving that goal, however, is not protectionist rules, as in the United States, but protectionist discretion.

The empirical results have implications for EC trade policy after 1992. If protectionist interests demand compensation for the abolition of national protectionist barriers after 1992,¹⁷ EC antidumping measures offer them considerable scope for achieving their goals since such measures are to a large extent determined by political discretion. Antidumping measures can therefore become a pinnacle of "Fortress Europe."

The results also suggest certain strategic considerations for the trade policy of developing countries. We have argued that antidumping measures affecting developing countries are concentrated in industries with shifting comparative advantage and that such protection is more likely in sectors with strong, politically influential interest groups. If that is indeed the case, then it is not sufficient that developing countries simply follow an export-oriented trade strategy; they also need to concentrate on sectors that have weak political influence in developed countries.

Notes

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1. For that reason, the EC's antidumping policy has drawn the attention of trade policy analysts. Tharakan (1988) and Messerlin (1987, 1989) have studied the incidence of antidumping applications and its protectionist impact by sectors and countries. A seminal study of U.S. import policy was conducted by Baldwin (1985).
2. This count of EC cases by exporting firm accused of dumping is larger than the number presented in table 1.1 in chapter 1, which is based on data reported to the GATT and counts cases by exporting country. Many antidumping cases name several firms in an exporting country, so counting by firms rather than countries results in a larger number of cases.
3. In this analysis, "Eastern European countries" refers to members of the Council for Mutual Economic Assistance.
4. The share of imports refers only to imports from countries affected by antidumping measures. However, other imports are of very minor importance.
5. Hillman (1989, chapt. 11) and Finger (1989) provide a short overview of U.S. antidumping policy. Vermulst (1987) compares U.S. and EC practice from a legal perspective; Schuknecht and Ursprung (1990) provide a detailed institutional study of U.S and EC practice.
6. Several studies have identified a protectionist bias in the antidumping rules (Norall 1986, Palmeter 1989, Tharakan 1988, and Messerlin 1989). This bias increases the expected level of protection; however, it does not decide on political or technical determination.
7. A pending antidumping case has a certain harassment effect on exporters, however, whatever its ultimate resolution, because of the uncertainty it creates with respect to the price and quantity of future imports (Bhagwati 1988).
8. Detailed overviews of EC antidumping law are provided by Bael and Bellis (1985), Beseler and Williams (1986), Vermulst (1987), Bierwagen and Hailbronner (1988), Grolig and Bogaert (1987), and Bierwagen (1989).
9. Data on the preselection process are not published, but the rate of rejection at this stage is generally considered to be higher than 50 percent. The practice of secrecy at this stage suggests an intention to hide the preselection criteria. The closed nature of the preselection process does, however, avoid the harmful effect on imports of an antidumping threat.

10. Several hypotheses have been advanced to explain the choice between undertakings and duties. Hillman (1990) and Stegemann (1990) suggest that undertakings are device for facilitating collusion -- to set price floors for high fixed-cost industries, for example. Table 13.2 and the discussion in the text provide some evidence that undertakings may be a compensatory device for appeasing strong foreign interests through rent transfers.

11. We suspect, however, that not only the result of an investigation but also the information provided in the reports was tailored to the political winds. Scattered information on certain attributes of some cases resulted in many "missing values" in the investigation.

12. We used maximum likelihood estimation because our data were specific to each accused firm. This estimation technique determines the acceptance probability for each accused firm rather than predicting the number of affirmative decisions per year (as would an ordinary least squares regression).

13. Rho sq. adj. is defined as 1 minus (likelihood of fully specified model minus 0.5 times the number of parameters estimated)/likelihood of a model with alternative specific constants as the only "exogenous" variables. Models with a goodness of fit index (reflecting the model's explanatory power) of 20-40 percent should be considered to be fairly well specified. (See also Horowitz 1983 and Hensher and Johnson 1981, 51.)

14. Information on exports was drawn from the *OECD Statistics of Foreign Trade* (monthly bulletins). The variable is lagged by one year to reflect the situation during the period covered by the investigation. Data for 1989 were not available; 1988 values were used.

15. For firms in the newly industrialized countries, the relatively recent entry into the EC market and lack of EC lobbying experience work in the same direction. Korea may be an exception since its economy is partly based on large conglomerates.

16. Data on value added and number of employees were available only at the three digit industry classification level (ISIC).

17. See Schuknecht (forthcoming) for an analysis of national protectionism in the EC.

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Table 1 EC antidumping cases, by country and outcome, 1980-90
(number of cases)

<i>Region/country</i>	<i>Rejection</i>	<i>Antidumping duty</i>	<i>Price undertaking</i>	<i>No. of cases</i>
Developed countries				
Australia	0	0	1	1
Austria	2	0	3	5
Belgium	0	0	1	1
Canada	3	6	4	13
Finland	0	1	10	11
Japan	31	85	59	175
Greece	2	0	0	2
Iceland	0	1	2	3
Israel	0	0	3	3
Norway	3	1	10	14
South Africa	2	1	2	5
Spain	15	5	10	30
Sweden	4	3	18	25
Switzerland	0	0	1	1
United States	42	67	47	156
Eastern Europe				
Albania	1	0	0	1
Bulgaria	4	4	5	13
Czechoslovakia	7	7	27	41
German Democratic Republic	7	9	19	35
Hungary	5	2	12	19
Poland	7	4	20	31
Romania	10	2	24	36
USSR	10	18	16	44
Developing countries (excluding newly industrialized countries of Asia)				
Algeria	0	2	0	2
Argentina	1	1	1	3
Brazil	11	9	5	25
China, P.R.	4	9	12	25
Dominican Republic	1	0	0	1
Egypt	1	0	0	1
Korea, P.R.	1	0	0	1
Kuwait	0	1	0	1
Libya	0	1	0	1
Malaysia	1	0	1	2
Mexico	1	8	8	17
Portugal	2	0	1	3
Puerto Rico	0	3	0	3

Table 1 EC antidumping cases, by country and outcome, 1980-90 (cont.)

<i>Region/country</i>	<i>Rejection</i>	<i>Antidumping duty</i>	<i>Price undertaking</i>	<i>No. of cases</i>
Developing countries (cont.)				
Saudi Arabia	0	1	0	1
Surinam	1	1	0	2
Thailand	1	0	0	1
Trinidad and Tobago	1	1	0	2
Turkey	7	10	7	24
Venezuela	1	3	2	6
Virgin Islands	0	2	0	2
Yugoslavia	9	16	18	43
Zimbabwe	1	0	1	2
Newly industrialized countries (NICs)				
Hong Kong	2	7	1	10
Korea, Republic of	7	18	1	26
Singapore	2	2	3	7
Taiwan	10	7	11	28
Group totals				
Developed countries	104	170	171	445
Eastern Europe	51	46	123	220
Developing countries (inc. NICs)	65	101	72	238
Newly industrialized countries	21	34	16	71
All countries	220	317	366	903

Note: Cases are defined as final decisions on products of single firms or countries.
Source: Computed from data in the *Official Journal of the European Communities*
(Various issues).

Table 2 EC antidumping cases, by country group and outcome, 1980-90
(percentage of cases)

<i>Country group</i>	<i>Rejection</i>	<i>Antidumping duty</i>	<i>Price undertaking</i>	<i>Percentage of total cases</i>
Developed countries	23	38	39	49
Eastern Europe	23	21	56	24
Developing countries (inc. NICs)	27	43	30	27
Newly industrialized countries	30	48	22	8
All countries	24	35	41	100

Note: Cases are defined as final decisions on products of single firms or countries. Percentages are percentages of total cases for each group.

Source: Computed from data in the *Official Journal of the European Communities* (various issues).

Table 3 Selected country or country group shares of EC antidumping cases and EC Imports, 1980-90

<i>Country or group</i>	<i>Total number of cases</i>	<i>Cases as a percentage of cases against all countries</i>	<i>Percentage share of EC merchandise imports in 1982^a</i>	<i>Percentage of cases with a restrictive outcome</i>
All countries	903	100	100	76
Developed countries	445	49	60	77
Eastern Europe	220	24	10	77
Developing countries (inc. NICs)	238	27	30	73
Newly industrialized countries	71	8	4	70
Developed countries				
United States	156	17	19	73
Japan	175	19	7	82
Switzerland	1	0.1	6	100
Australia	1	0.1	1	100
Eastern Europe				
Romania	36	4	0.7	72
Czechoslovakia	41	4.5	0.6	83
German Democratic Republic	35	4	0.5	80
Developing countries				
Egypt	1	0.1	1.1	0
Yugoslavia	43	5	1	79
China, P.R.	25	3	1	84
Mexico	17	2	1	94
Turkey	24	3	0.7	71
Thailand	1	0.1	0.7	0
Malaysia	2	0.2	0.6	50
Newly industrialized countries				
Hong Kong	10	1	1.5	89
Taiwan	28	3	1	64
Korea, Rep.	26	3	1	73
Singapore	7	0.8	0.5	71

Note: Cases are defined as final decisions on products of single firms or countries.

a. Percentages of EC imports from all the countries affected by antidumping cases. Percentages are rescaled to add up to 100 percent.

Source: Computed from data in the *Official Journal of the European Communities* (various issues) and *OECD Statistics of Foreign Trade*.

Table 4 Percentage of EC antidumping cases by sector and country group

<i>Sector</i>	<i>Developed countries</i>	<i>Eastern Europe</i>	<i>Developing countries (inc. NICs)</i>	<i>Newly industrialized countries</i>	<i>Total</i>
Chemical products ^a	37	42	40	31	39
Steel and steel products	4	4	17	1	7
Machinery	14	7	4	7	9
Office, computing machinery	8	0	0	0	4
Electrical machinery (mostly household machinery)	2	13	2	0	5
Consumer electronics	5	0	10	35	5
Other sectors	30	34	27	26	31

a. For developing countries, mainly synthetic fibers.

Source: Computed from data in the *Official Journal of the European Communities* (various issues)

Table 5 Discretionary decisionmaking in the EC and U.S. antidumping process

<i>Stage</i>	<i>European Community</i>	<i>United States</i>
Preselection	considerable	none
Investigation		
Procedure		
Time frame	moderate	none
Rights of parties	none	none
Preliminary duties	moderate	none
Circumvention	moderate	none
Rejection/approval		
Dumping	moderate	none
Injury	considerable	moderate
Community interest	considerable	--
Instrument selection	considerable	considerable
Level of protection	moderate	none

Table 6 Acceptance/rejection test: estimations of binary logit models
 (dependent variable: acceptance = 1, rejection = 0)

<i>Political and technical influence factors</i>	<i>Expected direction of impact</i>	<i>Estimation 6.1</i>	<i>Estimation 6.2</i>	<i>Estimation 6.3</i>
Constant		-2.3687 (-2.86)**	-0.8489 (-1.35)	-2.3637 (-1.55)
Political influences				
<i>International</i>				
EC exports to country	-	-0.0001 (-0.86)		
Applications against newly industrialized country	+	-1.1653 (-1.82)**		-0.9209 (-1.84)**
Applications against developing country	+	-0.4050 (-1.37)		-0.2515 (-0.71)
Applications against Eastern European country	-	0.0047 (0.02)		-0.4623 (-1.35)
<i>Domestic</i>				
Value added	+	2.8335 (2.90)**		11.7619 (2.71)**
Number of employees	+	-0.0044 (3.29)**		0.0129 (4.74)**
Association as petitioner	+	0.0027 (0.01)		-0.3987 (-0.85)
No refusal of support by EC firms	+	1.4982 (2.25)*		1.8679 (1.85)*
Industrial policy argument (government intervention)	+	1.3892 (4.02)**		2.6819 (4.55)**
Change of administrative rules (end of 1984)	+	0.7317 (3.08)**		0.6922 (1.81)*
Technical influences				
<i>Dumping</i>				
Average wage	-		5.9939 (1.97)*	-27.6701 (-1.82)*
Number of products affected	-		0.0666 (1.17)	
<i>Injury</i>				
Change of EC market share	-		-0.0302 (-1.65)*	-0.0723 (-2.72)**
Change of foreign market share	+		-0.0006 (-0.03)	-0.0557 (-2.57)**
Layoffs in EC industry	+		0.9856 (3.05)**	1.1802 (2.94)**
Decrease in EC industry's profits	+		1.3395 (4.88)**	1.2642 (3.98)**
Adjusted goodness of fit index (ρ^2 adj.)		0.071	0.115	0.277
Number of observations		580	544	541

Note: Numbers in parentheses are t-ratios.

* indicates rejection of H_0 at the 5 percent level of significance.

** indicates rejection of H_0 at the 1 percent level of significance.

^w indicates unexpected sign.

Data Appendix Table. Independent variables considered for inclusion in estimations

<i>Independent variable</i>	<i>Variable type</i>	<i>Data source</i>
Political variables		
<i>International variables</i>		
Total EC exports to country accused in period t-1	Continuous (in 10 ⁶ ECU)	<i>OECD Monthly Statistics of Foreign Trade</i>
Application against newly industrialized countries	Dummy	<i>Official Journal of the European Communities, Series L</i>
Application against developing countries	Dummy	<i>Official Journal of the European Communities, Series L</i>
Application against Eastern European country	Dummy	<i>Official Journal of the European Communities, Series L</i>
<i>Domestic variables</i>		
Value added by petitioning EC industry in period t-1 (ISIC 3-digit level)	Continuous (in 10 ⁵ ECU)	UNIDO database
10 ⁻⁴ x number of employees in petitioning EC industry in period (t-1)	Continuous	UNIDO database
Association as petitioner	Dummy	<i>Official Journal of the European Communities, Series L</i>
No refusal of support by EC firms	Dummy	<i>Official Journal of the European Communities, Series L</i>
Intervention of EC member governments (industrial policy argument)	Dummy	<i>Official Journal of the European Communities, Series L</i>
Final decision before change of administrative rules (end of 1984)	Dummy	<i>Official Journal of the European Communities, Series L</i>

Data Appendix Table. Independent variables considered for inclusion in estimations (cont.)

<i>Independent variable</i>	<i>Variable type</i>	<i>Data source</i>
Technical variables		
<i>Dumping</i>		
Average wage (including salaries) in petitioning industry in period t-1	Continuous (in 10 ⁵ ECU)	UNIDO database
Number of products affected (by NIMEXE positions)	Continuous	<i>Official Journal of the European Communities, Series L</i>
<i>Injury</i>		
Absolute change of EC market share	Continuous	<i>Official Journal of the European Communities, Series L</i>
Absolute change of foreign market share	Continuous	<i>Official Journal of the European Communities, Series L</i>
Layoffs in petitioning EC industry	Dummy	<i>Official Journal of the European Communities, Series L</i>
Decrease in ED industry's profits/increase in losses	Dummy	<i>Official Journal of the European Communities, Series L</i>

Note: All ECU values have been deflated to 1980 values. Dummy variables take the value of one for the category described.

Sources of information on exchange rates and price indices: Deutsche Bundesbank (1990) and Eurostat (1989).

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